UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	Proceedings Pursuant to
Duke Energy Indiana, Inc.	)	Section 113(a)(1) and (a)(3) of the
Gibson Station	)	Clean Air Act,
Owensville, Indiana	)	42 U.S.C. §7413(a)(1) and (a)(3)
	)	
	)	**EPA-5-13-IN-11**
	)	
	)	

NOTICE OF VIOLATION AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation and Finding of Violation (NOV/FOV) in accordance with Section 113(a) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a). The authority to issue this NOV/FOV has been delegated to the Regional Administrator of the U.S. Environmental Protection Agency, Region 5, and redelegated to the Director, Air and Radiation Division. This NOV/FOV updates, but does not supersede, the previous FOV/NOV issued to Duke Energy Indiana, Inc. (Duke Energy) on or about June 23, 2011.

EPA finds that Duke Energy has violated and continues to violate the CAA, 42 U.S.C. §§ 7401 *et seq.*, its implementing regulations, the Indiana State Implementation Plan (SIP) and its TitleV Operating Permit (Part 70 Operating Permit), at its Electric Utility Generating Station, located in Owensville, Indiana (Gibson Station).

STATUTORY AND REGULATORY BACKGROUND

1. The CAA is designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the CAA, 42 U.S.C. § 7401(b)(1).

2. Section 108(a) of the CAA, 42 U.S.C. § 7408(a), requires the Administrator of EPA to identify and prepare air quality criteria for each air pollutant, emissions of which may endanger public health or welfare, and the presence of which results from numerous or diverse mobile or stationary sources. For each such "criteria" pollutant, Section 109 of the CAA, 42 U.S.C. § 7409, requires EPA to promulgate national ambient air quality standards (NAAQS) to protect the public health and welfare.

3. Section 110 of the CAA, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA for approval a State Implementation Plan (SIP) that provides for the implementation, maintenance, and enforcement of the NAAQS. Section 110 also requires that each SIP contain adequate provisions prohibiting any source within the state from emitting any air pollutants in amounts which will interfere with attainment or

maintenance of the NAAQS or cause significant deterioration of air quality in any other state. *See* 40 C.F.R. Part 52.

4. Section 111 of the CAA, 42 U.S.C. § 7411, requires the Administrator of the EPA to establish federal standards of performance for new sources within the list of categories of stationary sources. *See* 40 C.F.R. Part 60..

5. Section 502(b) of the CAA, 42 U.S.C. § 7661, requires the Administrator of the EPA to promulgate regulations which establish the minimum elements of a permit program to be administered by any air pollution control agency. *See* 40 C.F.R. Part 70.

Indiana State Implementation Plan – Opacity Regulations

6. EPA approved Indiana's revised opacity regulations at 326 IAC 5-1 as part of the federally enforceable Indiana SIP on July 16, 2002. *See 67 Fed. Reg. 46589.*

7. 326 IAC 5-1-2 of the Indiana SIP states that, unless otherwise stated, opacity shall meet the following limitations: (A) Opacity shall not exceed an average of forty percent (40%) in any one (1), six (6)-minute averaging period. (B) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes in a six (6) hour period.

8. 326 IAC 5-1-3 of the Indiana SIP sets forth temporary opacity limitations (TAOLs).

New Source Performance Standards: Subpart D

9. 40 C.F.R. § 60.42(a)(2) states that "no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases that: exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity."

10. 40 C.F.R. § 60.11(c) of the general provisions of the New Source Performance Standards (NSPS) states that, "the opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard."

11. 40 C.F.R. § 60.11(d) of the general provisions of the NSPS states that, "[a]t all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source."

12. 40 C.F.R. § 60.2 defines "malfunction" as "any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions."

Title V Requirements

13. EPA promulgated full approval of Indiana's Title V program on December 4, 2001. Indiana's Title V program became effective on November 30, 2001. *See* 66 *Fed. Reg.* 62969.

14. The Indiana regulations governing the Title V permitting program are codified at 326 IAC 2-7.

15. On June 8, 2009, IDEM issued a renewed Part 70 Operating Permit No. T 051-27086-00013 (Part 70 Operating Permit) to Duke Energy, in accordance with 326 IAC 2-7 of the Indiana SIP and 40 C.F.R. Part 70.

16. The Part 70 Operating Permit contains the following relevant provisions for purposes of this NOV/FOV:

    a. Section C.2 – Opacity: "Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit: (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4. (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes...in a six (6) hour period."

    b. Section C.18 – "(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions)."

    c. Sections D.1.2 and D.2.2 – Temporary Alternative Opacity Limitations: "Pursuant to 326 IAC 5-1-3(e), the following applies: (a) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours...or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first... (b) When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours...(c) Permittee is also allowed one start up and one shut down per calendar year as follows: (i) When building a new fire in a boiler, opacity may exceed the 40%

opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours...or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first. (ii) When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours...(d) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6)-minute averaging period in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6)-minute averaging periods in a twelve (12) hour period."

d. Sections D.3.2, and D.4.2 – Temporary Alternative Opacity Limitations: "Pursuant to 326 IAC 5-1-3(e), the following applies: (a) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours...or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first...(b) When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of four (4) hours...(c) Permittee is also allowed one start up and one shut down per calendar year as follows: (i) When building a new fire in a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of seven (7) hours... or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit, whichever occurs first. (ii) When shutting down a boiler, opacity may exceed the 40% opacity limitation established in 326 IAC 5-1-2 for a period not to exceed a total of five (5) hours...(d) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6)-minute averaging period in any sixty minute (60) period. The averaging periods shall not be permitted for more than three (3) six (6)-minute averaging periods in a twelve (12) hour period."

e. Section D.5.1(b) – New Source Performance Standards (NSPS): "Pursuant to 326 IAC 12, 40 C.F.R. 60, Subpart D... emissions from Boiler No. 5 shall not exceed the following: (b) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven (27%) percent opacity. Pursuant to 40 C.F.R. 60.11(c), this opacity standard is not applicable during periods of startup, shutdown, or malfunction."

FACTUAL BACKGROUND

17. Duke Energy is a "person," as that term is defined in Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

18. Gibson Station is located in Gibson County in Owensville, Indiana.

19. From April 5, 2005 to the present, the Gibson Station has been located in an area classified as nonattainment for fine particulates ($PM_{2.5}$). *See* 70 *Fed. Reg.* 944 (January 5, 2005).

20. Duke Energy operates five coal-fired boilers at the Gibson Station (Units 1-5).

21. Unit 5 is subject to New Source Performance Standards at 40 C.F.R. Part 60.

22. Table 1 below contains a summary of the opacity exceedances from January 2011 to March 2013, as reported to IDEM in the facility's Quarterly Deviation and Compliance Monitoring Report. This table updates, but does not supersede, the table contained in the June 23, 2011 NOV/FOV issued to Duke Energy.

Table 1: Opacity Exceedances (in minutes)

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
2011:					
1st Quarter	360	936	870	150	1,902
2nd Quarter	72	948	876	288	948
3rd Quarter	516	582	2,646	654	282
4th Quarter	552	936	714	582	66
2012:					
1st Quarter	240	324	504	1,080	2,316
2nd Quarter	390	300	510	342	420
3rd Quarter	108	480	426	594	894
4th Quarter	258	408	768	492	570
2013:					
1st Quarter	156	162	1,086	822	1,074

ALLEGED VIOLATIONS

23. Duke Energy violated and continues to violate the CAA, its implementing regulations, 326 IAC 5-1 of the Indiana SIP and the facility's Part 70 Operating Permit by exceeding the forty/sixty percent opacity limitation at Units 1 through 4.

24. Duke Energy violated and continues to violate the CAA, its implementing regulations, specifically the NSPS at 40 C.F.R. Part 60, Subpart D, and the facility's Part 70

Operating Permit by exceeding the twenty percent opacity limitation at Unit 5.

25. Duke Energy violated and continues to violate its Part 70 Operating Permit, specifically Section C.18, by failing to restore operation of Units 1 through 5 (including any control device and associated capture system) to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

26. Duke Energy violated and continues to violate 40 C.F.R. § 60.11(d) of the NSPS General Provisions, by failing to maintain and operate its facility including associated air pollution control equipment on Unit 5 in a manner consistent with good air pollution control practice for minimizing emissions.

ENFORCEMENT AUTHORITY

27. Sections 113(a)(1) and (3) of the CAA, 42 U.S.C. § 7413(a)(1) and (3), provide that the Administrator may issue an administrative penalty order pursuant to Section 113(d), 42 U.S.C. § 7413(d), or bring a civil action pursuant to Section 113(b), 42 U.S.C. § 7413(b), for injunctive relief and/or civil penalties whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of, *inter alia*, an applicable implementation plan, a standard of performance and Title V of the CAA, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued thereunder. *See also* 40 C.F.R. § 52.23.

Environmental Impact of Violations

28. Particulate matter, especially fine particulates, contains microscopic solids or liquid droplets, which can get deep into the lungs and cause serious health problems. Particulate matter exposure contributes to:

- irritation of the airways, coughing, and difficulty breathing;
- decreased lung function;
- aggravated asthma;
- chronic bronchitis;
- irregular heartbeat;
- nonfatal heart attacks; and
- premature death in people with heart or lung disease.

7/16/13
Date

George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. EPA-5-13-IN-11, by Certified Mail, Return Receipt Requested, to:

Douglas F. Esamann
President
Duke Energy Indiana, Inc.
1000 East Main Street
Plainfield, Indiana 46168

I also certify that I sent a copy of the Request to Provide Information Pursuant to the Clean Air Act by First-Class Mail to:

Scott R. Alexander
Taft Stettinius & Hollister LLP
One Indiana Square, Suite 3500
Indianapolis, Indiana 46204-2023

Phil Perry, Branch Chief
Office of Air Quality / Compliance Branch
Indiana Department of Environmental Management
100 North Senate Avenue / Room IGCN 1003
Indianapolis, Indiana 46204-2251

On the 17 day of July 2013.

Loretta Shaffer
Administrative Professional Assistant
Planning and Administration Section

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7670 1914

Enclosure

cc: Phil Perry, Branch Chief
Office of Air Quality / Compliance Branch
Indiana Department of Environmental Management
100 North Senate Avenue / Room IGCN 1003
Indianapolis, Indiana 46204-2251

Scott R. Alexander
Taft Stettinius & Hollister LLP
One Indiana Square, Suite 3500
Indianapolis, Indiana 46204-2023